Fig. 1

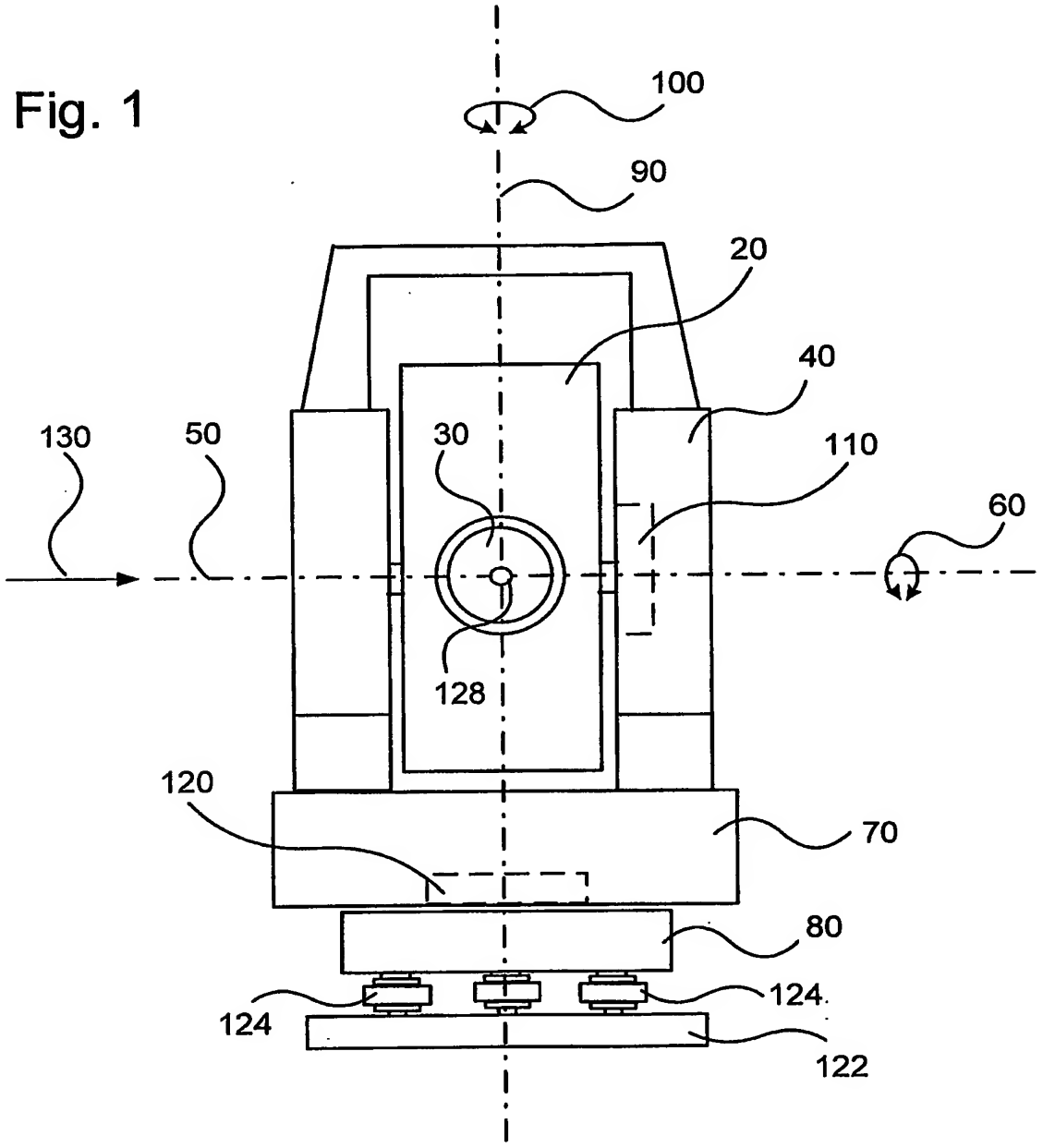


Fig. 2a

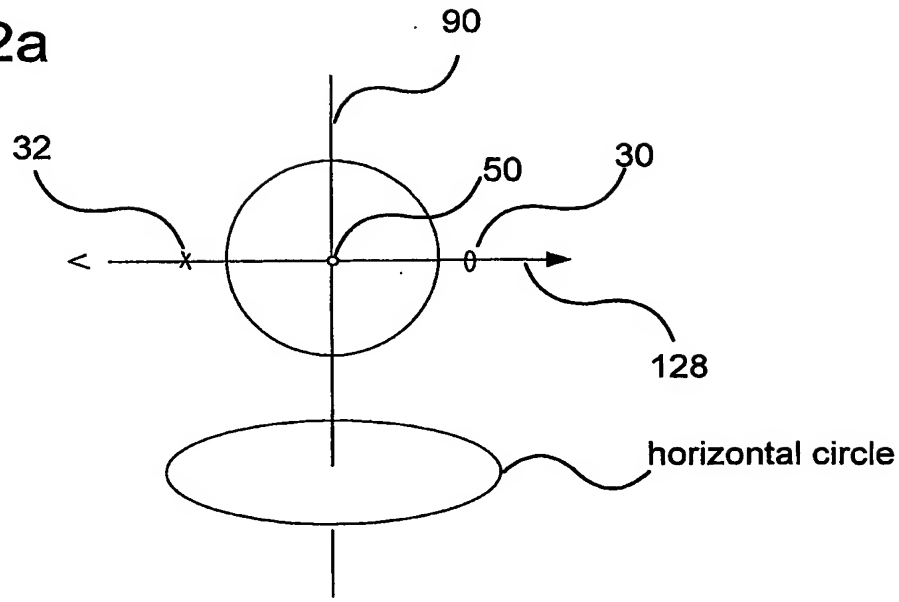

90
32
50
30
128
horizontal circle

Fig. 2b

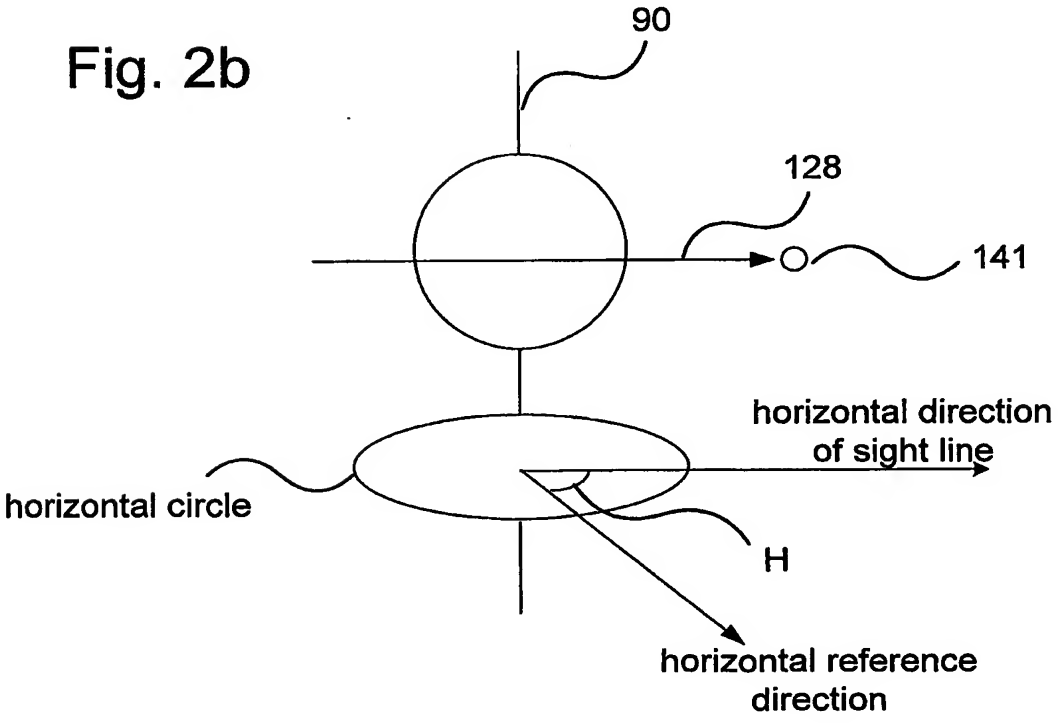

90
128
141
horizontal direction
of sight line
horizontal circle
H
horizontal reference
direction

Fig. 2c

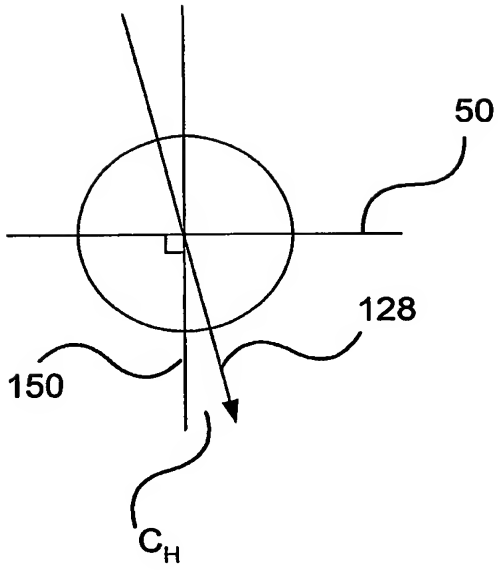


Fig. 2d

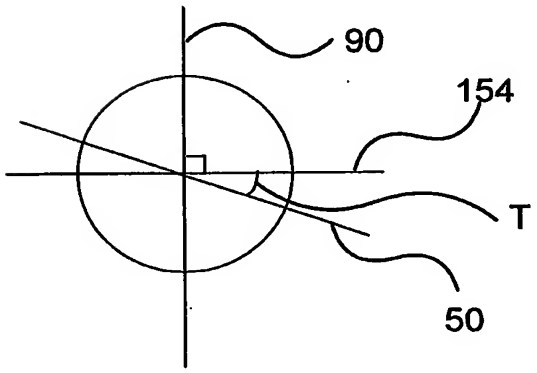


Fig. 2e

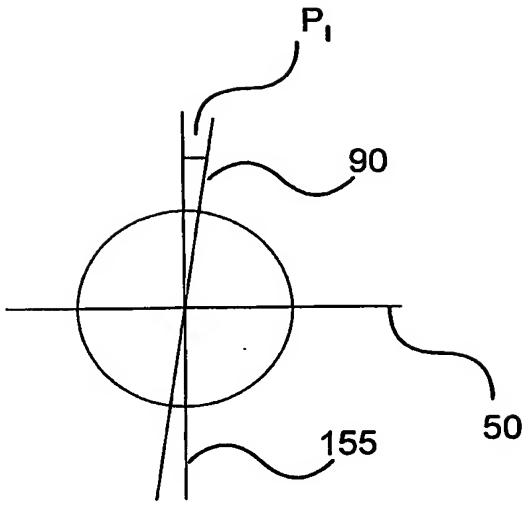
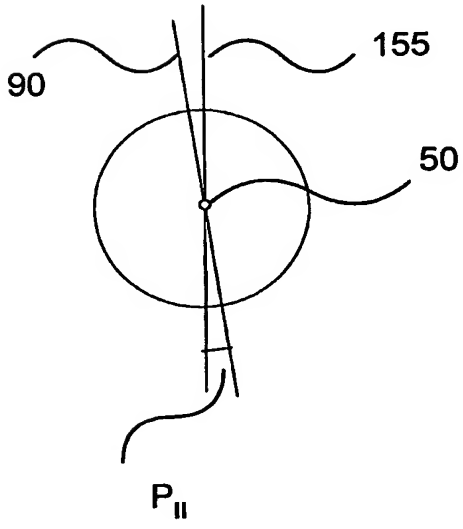


Fig. 2f



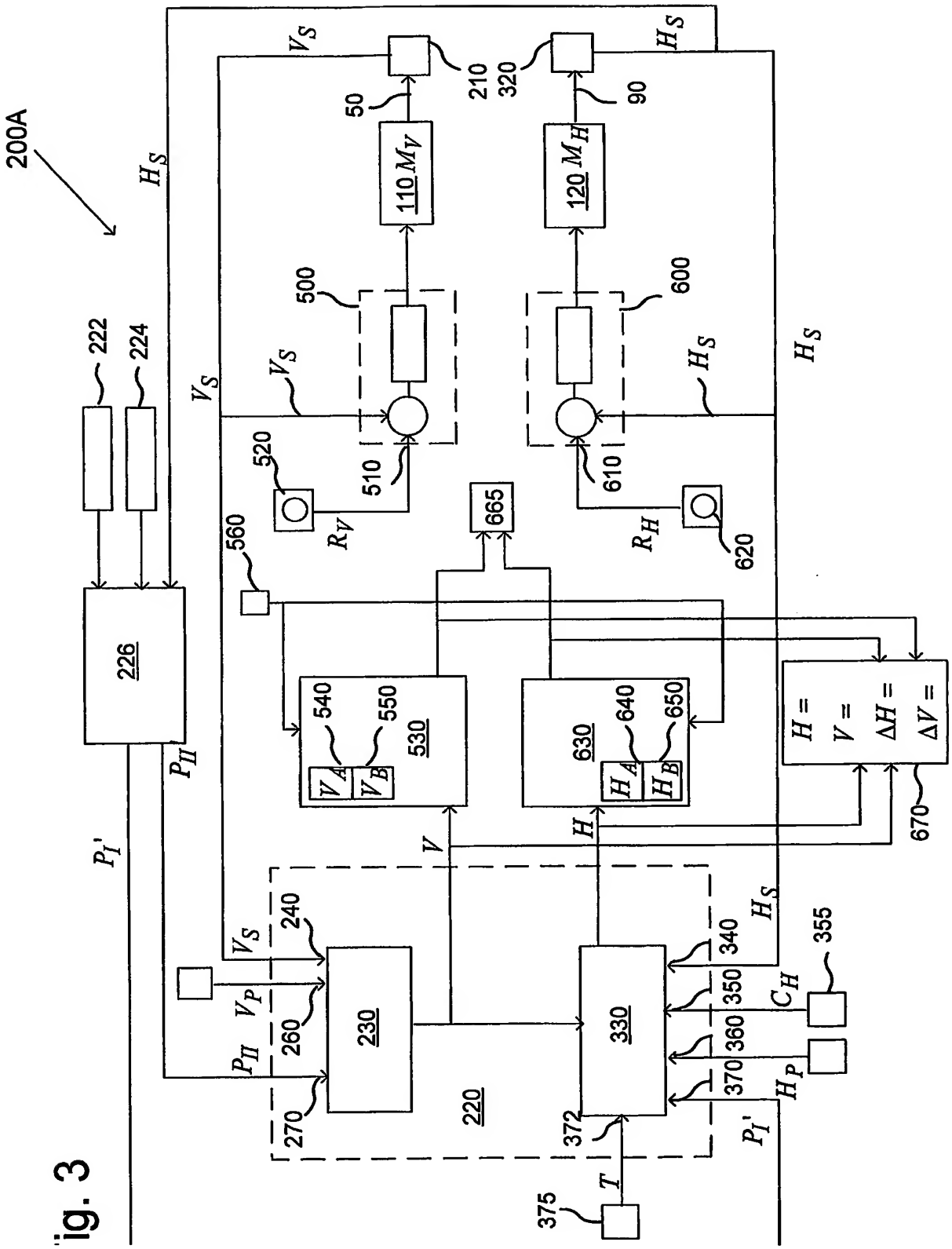
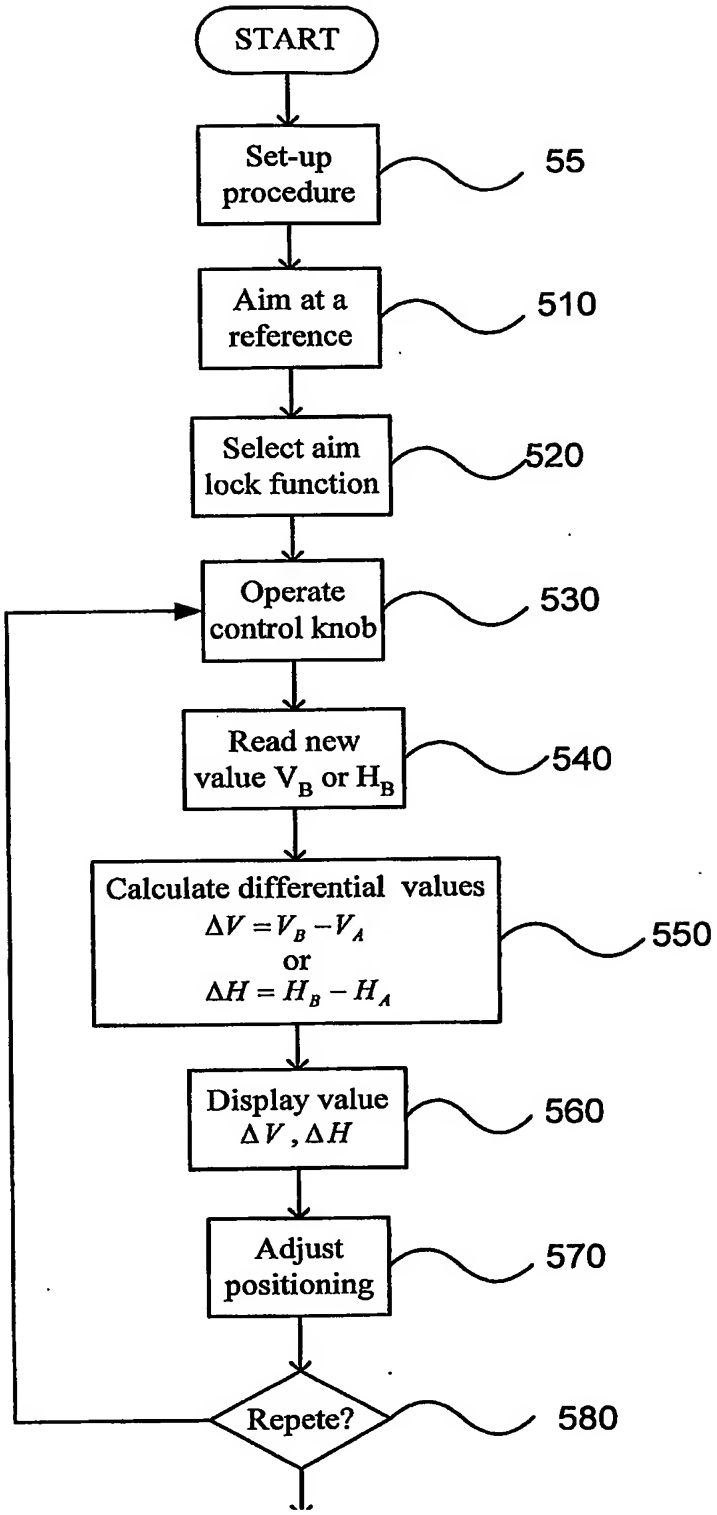

200A
222
224
226
P_I'
P_{II}
H_S
V_S
210
320
50
90
110 M_V
120 M_H
500
600
510
610
520
R_V
R_H
560
665
620
540
550
530
V_A
V_B
630
640
650
H_A
H_B
H =
V =
ΔH =
ΔV =
670
V
H
240
V_P
260
270
230
220
340
350
360
370
372
330
355
C_H
H_P
T
375

Fig. 3

Fig. 4


START
Set-up procedure
55
Aim at a reference
510
Select aim lock function
520
Operate control knob
530
Read new value V_B or H_B
540
Calculate differential values
$\Delta V = V_B - V_A$
or
$\Delta H = H_B - H_A$
550
Display value
$\Delta V, \Delta H$
560
Adjust positioning
570
Repete?
580

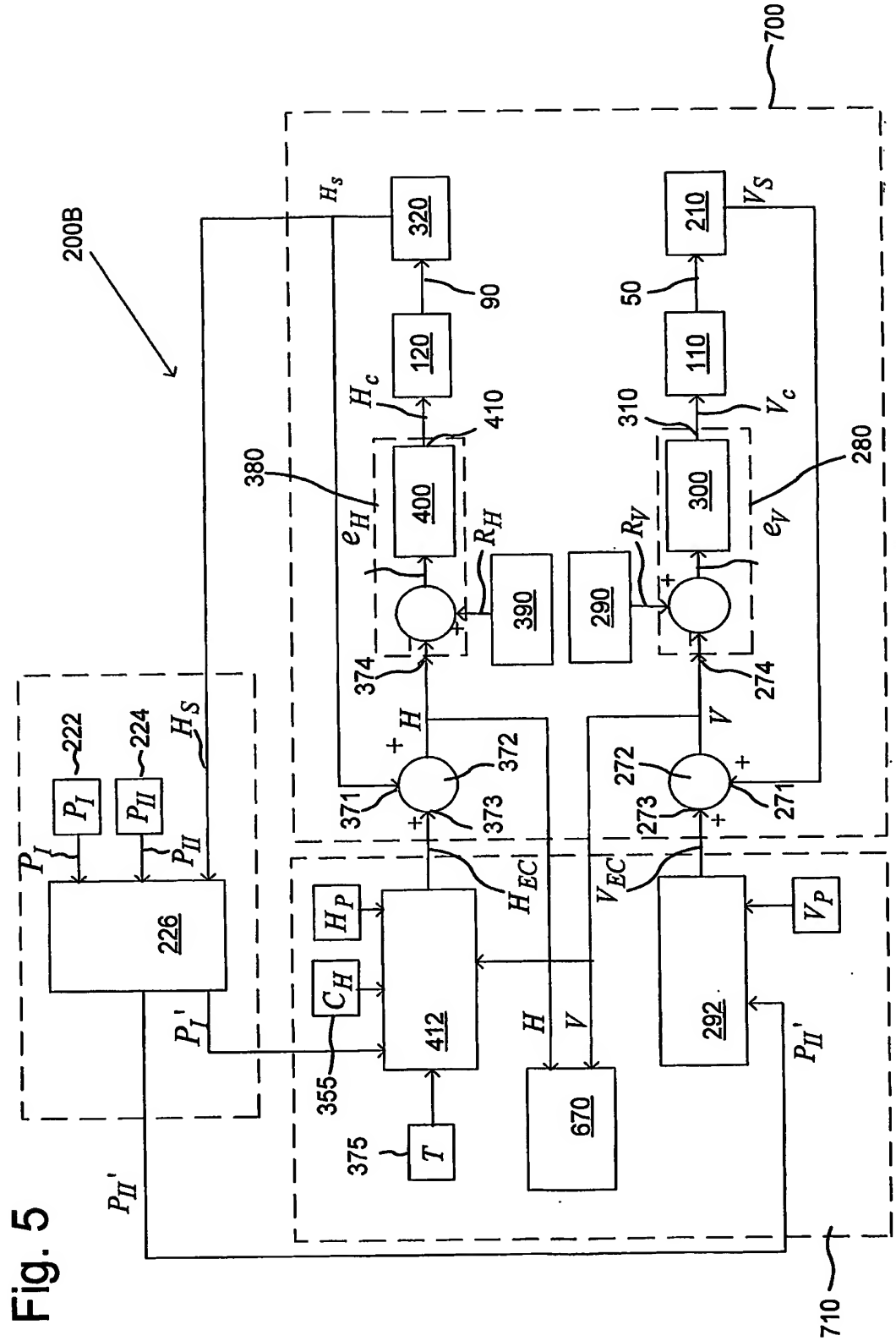

700
200B
320
120
400
390
290
300
210
110
226
412
670
292
222
224
P_I
P_{II}
H_S
V_S
H_c
V_c
H_P
V_P
C_H
H_{EC}
V_{EC}
R_H
R_V
e_H
e_V
P_I'
P_{II}'
H
V
T
90
50
410
310
280
380
374
372
371
373
272
273
274
271
355
375
710
271

Fig. 5

Fig. 6

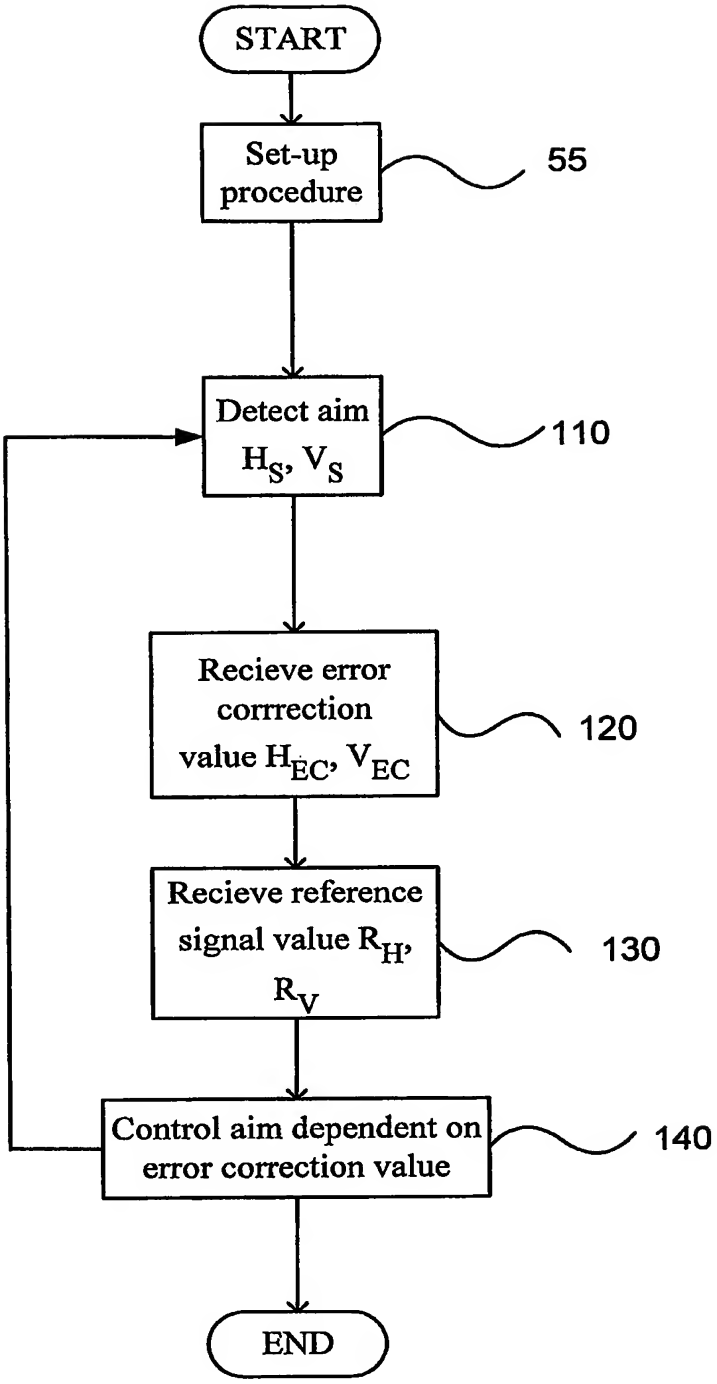

START
Set-up procedure
55
Detect aim H_S, V_S
110
Recieve error corrrection value H_{EC}, V_{EC}
120
Recieve reference signal value R_H, R_V
130
Control aim dependent on error correction value
140
END

Fig. 7

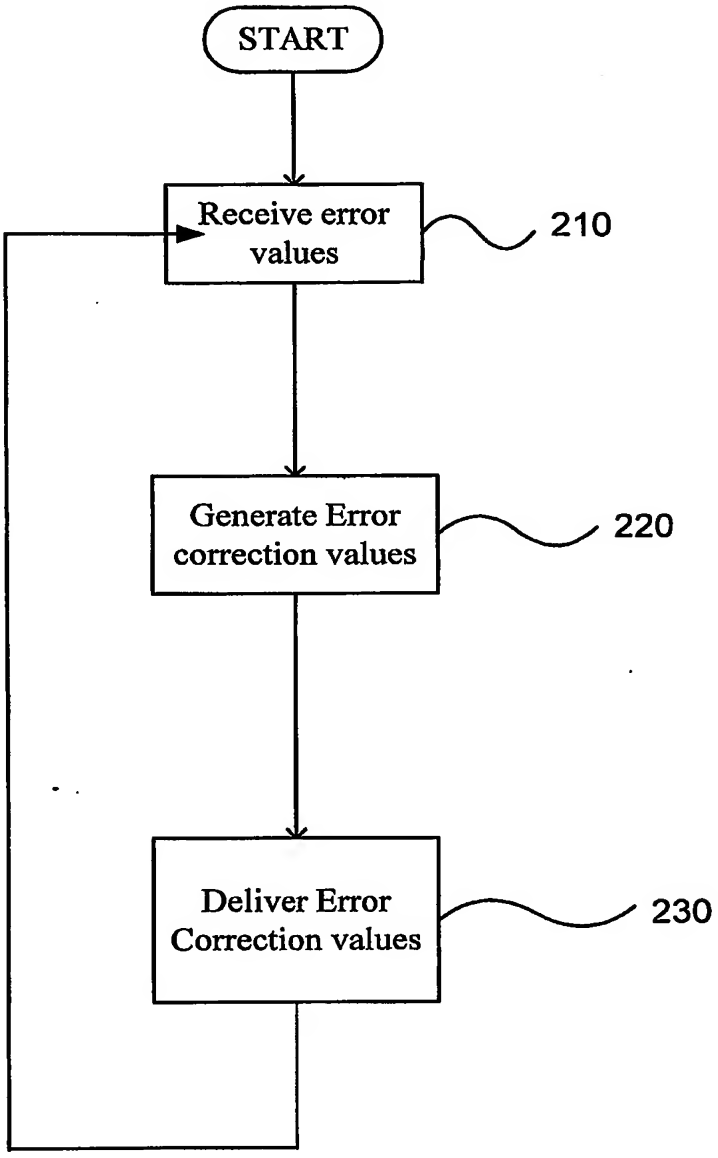

START
Receive error values
210
Generate Error correction values
220
Deliver Error Correction values
230

Fig. 8

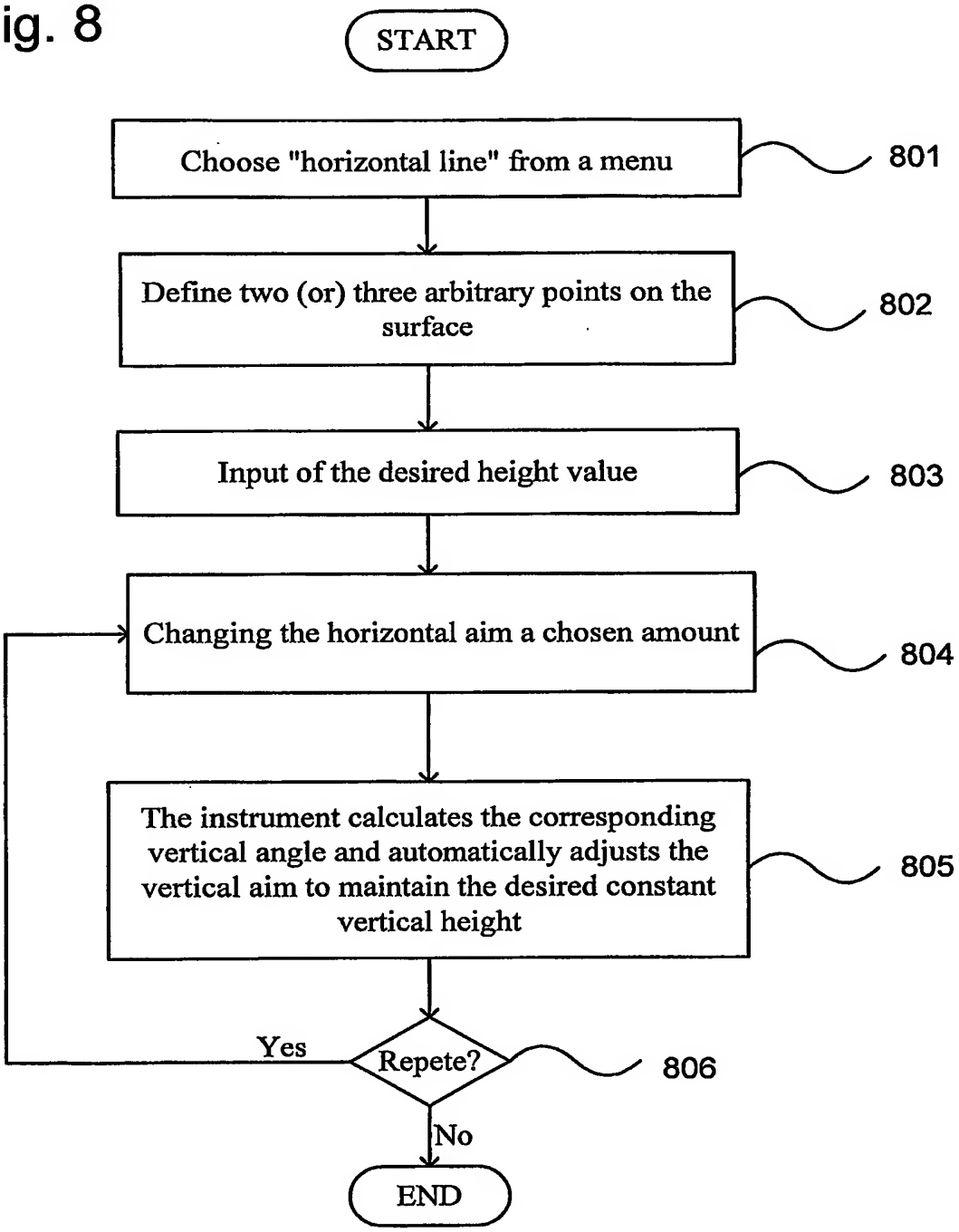

START
Choose "horizontal line" from a menu
801
Define two (or) three arbitrary points on the surface
802
Input of the desired height value
803
Changing the horizontal aim a chosen amount
804
The instrument calculates the corresponding vertical angle and automatically adjusts the vertical aim to maintain the desired constant vertical height
805
Yes
Repete?
806
No
END

Fig. 9

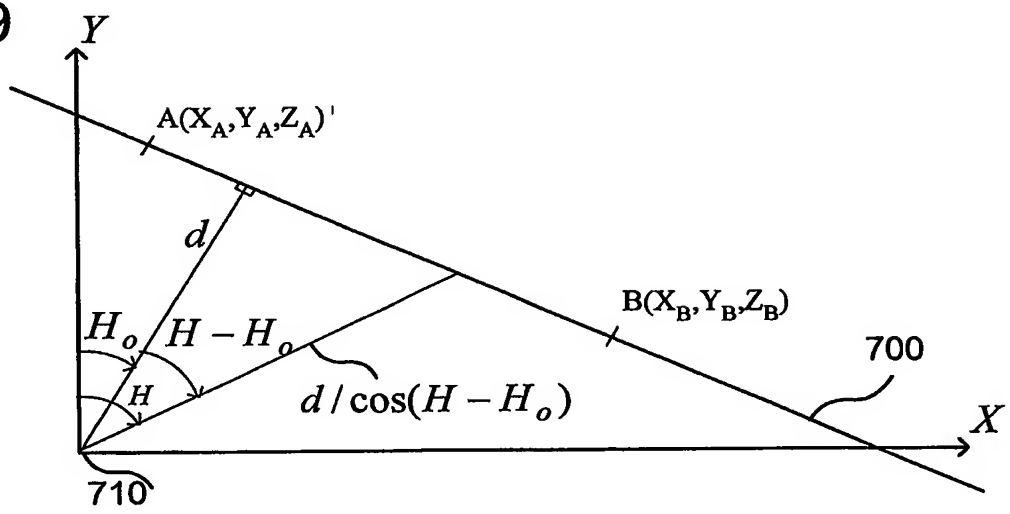


Fig. 10

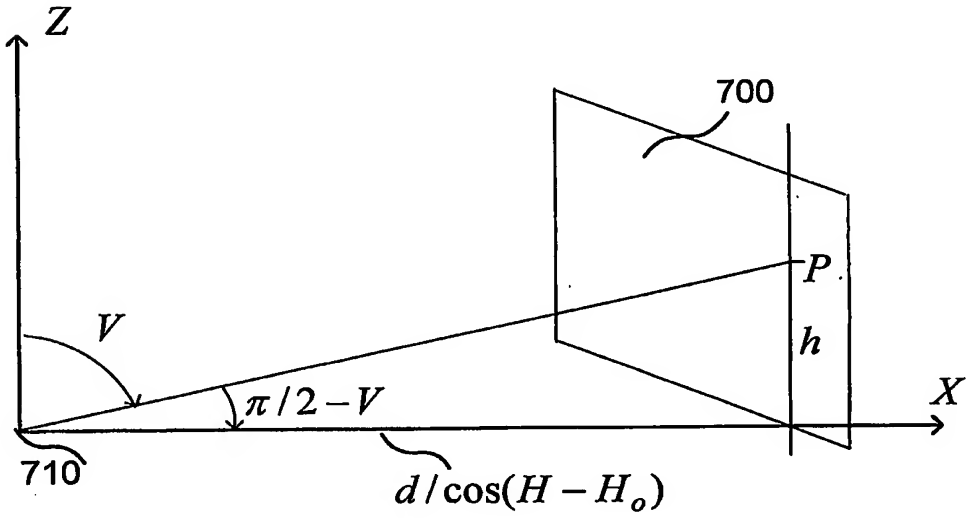


Fig. 11

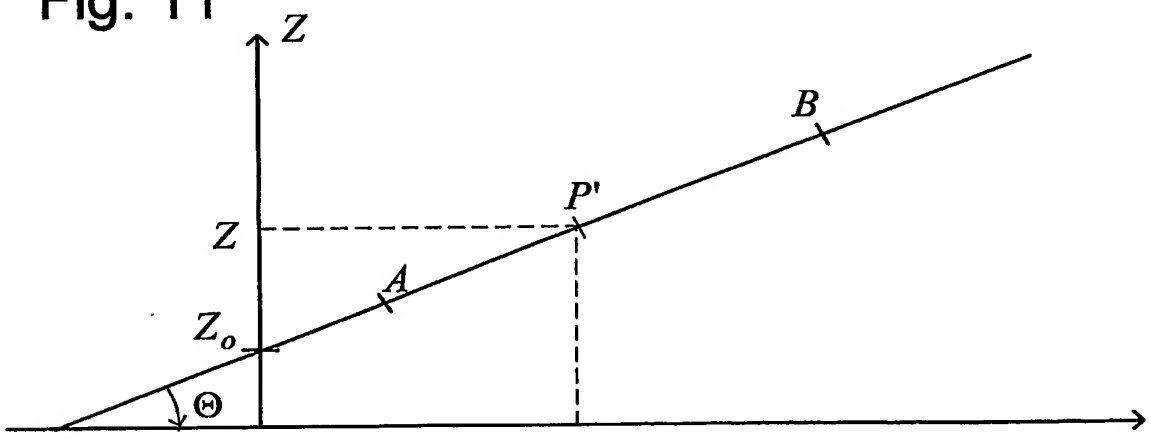
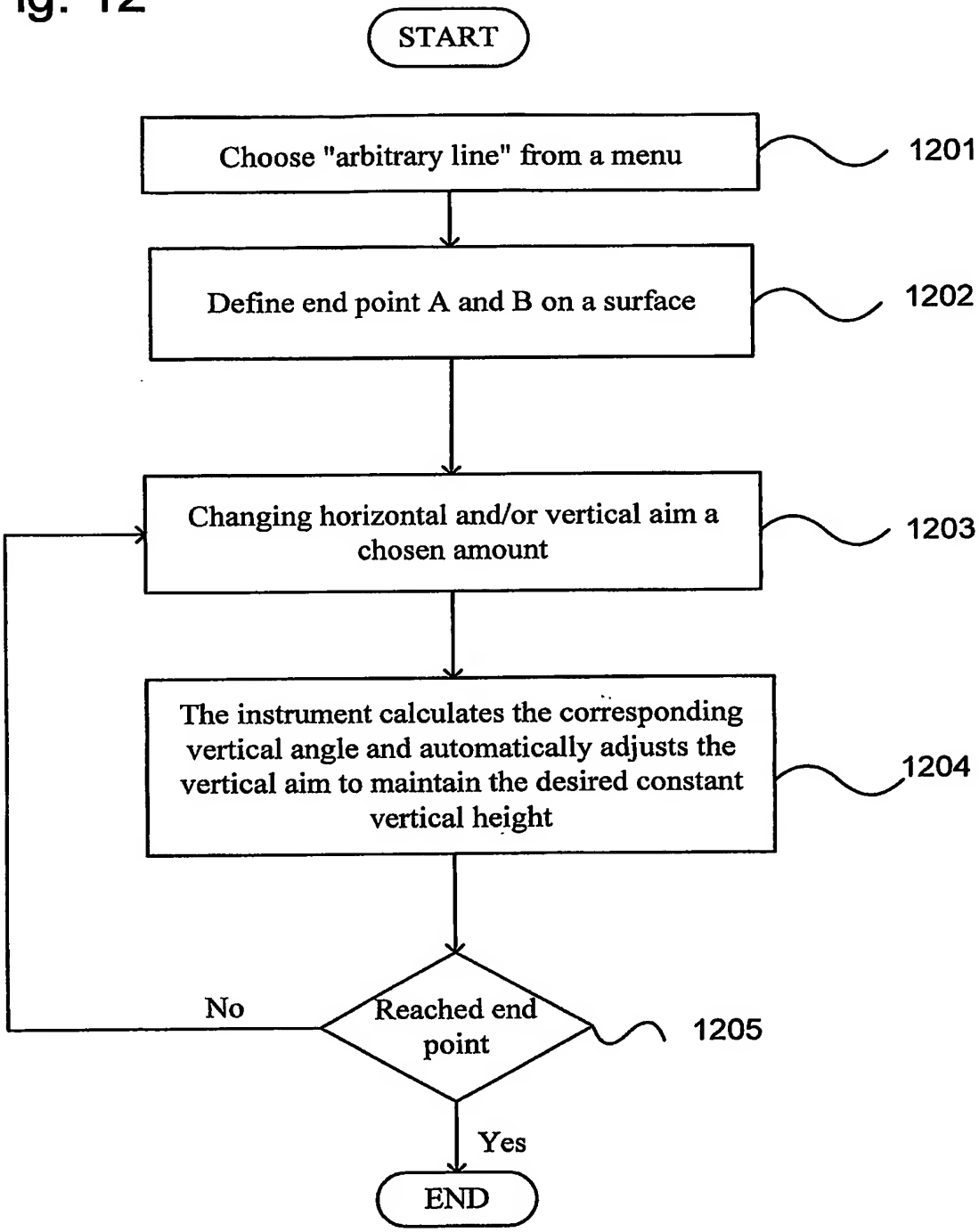


Fig. 12


START
Choose "arbitrary line" from a menu
1201
Define end point A and B on a surface
1202
Changing horizontal and/or vertical aim a chosen amount
1203
The instrument calculates the corresponding vertical angle and automatically adjusts the vertical aim to maintain the desired constant vertical height
1204
Reached end point
1205
No
Yes
END